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(54) **HYDROGENOLYSIS OF 5-CARBON SUGARS,
SUGAR ALCOHOLS, AND OTHER
METHODS AND COMPOSITIONS FOR
REACTIONS INVOLVING HYDROGEN**

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568/864

(58) **Field of Search** 568/863, 861,
568/862, 864

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(57) **ABSTRACT**

Methods and compositions for reactions of hydrogen over a
Re-containing catalyst with compositions containing a
5-carbon sugar, sugar alcohol, or lactic acid are described. It
has been surprisingly discovered that reaction with hydrogen
over a Re-containing multimetallic catalyst resulted in supe-
rior conversion and selectivity to desired products such as
propylene glycol. A process for the synthesis of PG from
lactate or lactic acid is also described.

7 Claims, 7 Drawing Sheets